UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/195,728	11/18/1998	STEVEN M. DRUCKER	1026-006-112	4618

21034   7590   12/18/2003

IPSOLON LLP
805 SW BROADWAY, #2740
PORTLAND, OR 97205

EXAMINER
YANG, RYAN R

ART UNIT	PAPER NUMBER
2672	17

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/195,728	DRUCKER ET AL.
	Examiner	Art Unit	
	Ryan R Yang	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _14 August 2003_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-39_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-39_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _08 October 2002_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____ .

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5)☐ Notice of Informal Patent Application (PTO-152)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .   6)☐ Other: .

DETAILED ACTION

1.   This action is responsive to communications: Appeal Brief, filed on 8/14/02.

This action is non-final.

2.   Claims 1-39 are pending in this application. Claims 1,16, 27, 34 and 37 are

independent claims.

3.   The present title of the invention is "View Dependent Tiled Textures" as filed

originally.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.   Claims 1-36, 38 and 39 are rejected under 35 U.S.C. 112, first paragraph, as

containing subject matter which was not described in the specification in such a way as

to reasonably convey to one skilled in the relevant art that the inventor(s), at the time

the application was filed, had possession of the claimed invention.

    Claim 1 recites the limitation "image texture rendered simultaneously on a display

screen immediately adjacent each other" in texture mapping. There is insufficient

disclosure in the specification leading to the claimed limitation.

Claim 16 recites the limitation "rendering the texture map tiles simultaneously at the adjacent regions on the computer display screen" in applying a texture map. There is insufficient disclosure in the specification leading to the claimed limitation.

Claim 27 recites the limitation "selected viewing angles of plural adjacent tiles to be viewed simultaneously" in generating a tile data structure. There is insufficient disclosure in the specification leading to the claimed limitation.

Claim 34 recites "software instructions for simultaneously rendering the texture map tiles corresponding to the viewing angles" in a computer program. There is insufficient disclosure in the specification leading to the claimed limitation.

6.   Claims 2-15, 17-26, 28-33, 35, 36, 38 and 39 are similarly rejected since they are dependent on the rejected independent claims.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8.   Claims 1, 3-7, 9, 16-17, 19, 27-28, 30, 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwase et al. (5,616,079).

As per claim 1, Iwase et al., hereinafter Iwase, discloses a computer-readable medium having stored thereon a tile data structure for a tile representing an image texture for tiled texture mapping, comprising:

plural tile data structures representing plural respective views of the image

texture rendered simultaneously on a display screen immediately adjacent each other

("The game space setting means sets the game space by selecting one of this plurality

of map segment patterns on the basis of the position of the vehicle and the player's line-

of-sight direction ... In this state, if the player's line-of-sight direction changes so that it

is now within the second line-of-sight directional range, the configuration is such that

now the map segment pattern P22 is selected", column 5, line 7-27, where the

segmented pattern is adjacent tiles as in Figure 8 and P11 and P21 are of different

views).

9.   As per claim 3, Iwase demonstrated all the elements as applied to the rejection of

independent claim 1, supra, and further discloses the plural respective views

correspond to a range of user viewing angles that are rendered simultaneously on the

display screen, each tile data structure corresponding to a segment in the range of user

viewing angles (Figure 7 where the viewing angle of a segment is based on a range).

10.   As per claim 4, Iwase demonstrated all the elements as applied to the rejection of

claim 3, supra, and further discloses the segments in the range of user viewing angles

are not equal (Figure 9 where the segments are not equal).

11.   As per claim 5, Iwase demonstrated all the elements as applied to the rejection of

claim 4, supra, and further discloses viewing angles are with respect to a predetermined

reference and the segments closest to the predetermined reference are smaller that the

segments farthest from the predetermined reference orientation (Figure 9 shows that for

the uneven surface, the segments closer to the view point is smaller than the segments

further away).

12.   As per claim 6, Iwase demonstrated all the elements as applied to the rejection of

claim 3, supra, and further discloses the segments in the range of user viewing angles

are equal (Figure 9 shows the segments within the viewing angle and at the same

surface are equal).

13.   As per claim 7, Iwase demonstrated all the elements as applied to the rejection of

claim 3, supra, and further discloses the range of viewing angles extends over viewing

angles of positive and negative magnitudes relative to a viewpoint position ("the map

segment pattern shown in FIG. 11 is selected when the player's fighter is positioned

within a shaded range H, and the player's line-of-sight direction is between -11.25

degrees and 11.25 degrees", column 13, line 35-39).

14.   As per claim 9, Iwase demonstrated all the elements as applied to the rejection of

independent claim 1, supra, and further discloses the plural respective views are within

only one angular dimension ("the map segment pattern shown in FIG. 11 is selected

when the player's fighter is positioned within a shaded range H, and the player's line-of-

sight direction is between -11.25 degrees and 11.25 degrees", column 13, line 35-39).

15.   As per claim 16, Iwase discloses a computer method of applying a texture map to

an image surface in a graphics image rendered on a computer display screen,

comprising:

        identifying plural adjacent regions of the image surface to which regions the

texture map is to be applied ("The game space setting means sets the game space by

selecting one of this plurality of map segment patterns on the basis of the position of the

vehicle and the player's line-of-sight direction ...   In this state, if the player's line-of-sight

direction changes so that it is now within the second line-of-sight directional range, the

configuration is such that now the map segment pattern P22 is selected", column 5, line

7-27, where the segmented pattern is adjacent tiles as in Figure 8 and P11 and P21 are

of different views);

determining a user viewing angle for each of the plural regions (P11 and P21 are

of different viewing angles);

correlating each viewing angle with a texture map tile corresponding to the

viewing angle ("the configuration is such that now the map segment pattern P22 is

selected", column 5, line 26-27); and

rendering the texture map tiles simultaneously at the adjacent regions on the

computer display screen to form the texture map on the image surface (Since P11 and

P21 are a plurality of segmented image presented as an image surface).

16.   As per claim 17, Iwase demonstrated all the elements as applied to the rejection

of independent claim 16, supra, and further discloses the texture map tile corresponding

to the viewing angle for each region is one of plural predetermined texture map tiles

stored in a computer memory (P11 is a segment pattern previously stored, column 5,

line 3-12).

17.   As per claim 19, Iwase demonstrated all the elements as applied to the rejection

of independent claim 16, supra, and further discloses determining a viewing angle for

each region includes determining only one viewing angle for the region corresponding to angles within only one imaging plane (Figure 7).

18.   As per claim 27, Iwase discloses a method of generating a tile data structure in a computer readable medium representing an image texture for a tiled texture mapping, comprising:

determining plural selected viewing angles for viewing simultaneously plural adjacent tiles of the image texture ("The game space setting means sets the game space by selecting one of this plurality of map segment patterns on the basis of the position of the vehicle and the player's line-of-sight direction ... In this state, if the player's line-of-sight direction changes so that it is now within the second line-of-sight directional range, the configuration is such that now the map segment pattern P22 is selected", column 5, line 7-27, where the segmented pattern is adjacent tiles as in Figure 8 and P11 and P21 are of different viewing angles);

correlating each of the plural selected viewing angles to a predetermined range of viewing angles that includes the selected viewing angle, immediately successive predetermined viewing angle ranges being correlated to adjacent tiles of the image texture ("the configuration is such that now the map segment pattern P22 is selected", column 5, line 26-27); and

forming for each of the selected viewing angles a data structure that includes plural projections of the image texture relative to the selected viewing angles of plural adjacent tiles to be viewed simultaneously (Since P11 and P21 are a plurality of segmented image corresponding to a viewing angle presenting an image surface).

19.   As per claim 28, Iwase demonstrated all the elements as applied to the rejection

of independent claim 27, supra, and further discloses the image texture includes a front

surface with predetermined dimensions and the projections of the image texture relative

to the selected viewing angles maintains the predetermined dimensions of the front

surface of the image texture (Figure 8 where the image projected on the surface

maintains the same dimension).

20.   As per claim 30, Iwase demonstrated all the elements as applied to the rejection

of independent claim 27, supra, and further discloses the plural respective views are

within only one angular dimension ("the map segment pattern shown in FIG. 11 is

selected when the player's fighter is positioned within a shaded range H, and the

player's line-of-sight direction is between -11.25 degrees and 11.25 degrees", column

13, line 35-39).

21.   As per claim 34, Iwase discloses in a computer readable medium, computer

software instructions for applying a texture map to an image surface in a graphics image

rendered on a computer display screen (Figure 1 102), comprising:

        software instructions for identifying plural adjacent regions of the image surface

to which regions the texture map is to be applied ("The game space setting means sets

the game space by selecting one of this plurality of map segment patterns on the basis

of the position of the vehicle and the player's line-of-sight direction ... In this state, if the

player's line-of-sight direction changes so that it is now within the second line-of-sight

directional range, the configuration is such that now the map segment pattern P22 is

selected", column 5, line 7-27, where the segmented pattern is adjacent tiles as in

Figure 8 and P11 and P21 are of different views);

software instructions for determining a viewing angle for each of the plural

regions (P11 and P21 are of different viewing angles);

software instructions for correlating each viewing angle with a texture map tile

corresponding to the viewing angle ("the configuration is such that now the map

segment pattern P22 is selected", column 5, line 26-27); and

software instructions for simultaneously rendering the texture map tiles

corresponding to the viewing angles at the adjacent regions on the computer display

screen to form the texture map on the image surface (Since P11 and P21 are a plurality

of segmented image presented as an image surface).

22.   As per claim 35, Iwase demonstrated all the elements as applied to the rejection

of independent claim 34, supra, and further discloses the texture map tile corresponding

to the viewing angle for each region is one of plural predetermined texture map tiles

stored in a computer memory ("a plurality of map segment patterns are previously

stored to correspond with th positional range", column 5, line 3-5).

Claim Rejections - 35 USC § 103

23.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

24.   Claims 2, 8, 10-12, 15, 18, 20-24, 26, 29, 31, 33, 36-37, 39 are rejected under 35

U.S.C. 103(a) as being unpatentable over Iwase et al. as applied to claim 1 above.

As per claims 2, 24, 29 and 37, Iwase demonstrated all the elements as applied to the rejection of independent claims 1, 16, 27 and 34, supra, respectively.

As for the plural respective views of the image texture are based upon oblique-parallel projections of the image texture, the method is notoriously well known in the art and would have been obvious to one of ordinary skill in the art to used the method in order to obtain an image in perspective.

25.   As per claim 8, Iwase demonstrated all the elements as applied to the rejection of dependent claim 7, supra.

As for the segments of viewing angles of positive magnitudes to which tile data structures correspond are matched one-to-one with the segments of viewing angles of negative magnitudes to which tile data structures correspond, it is notoriously well known in the art to have the image with a view of positive angle to have an equivalent match of he image with a view of negative angle in order to save memory space.

26.   As per claim 10, Iwase demonstrated all the elements as applied to the rejection of dependent claim 9, supra.

As for the one angular dimension is a horizontal angular dimension corresponding to angles within a horizontal imaging plane, since the horizontal angular dimension is a notoriously well known angular dimension, it would have been obvious to one of ordinary skill in the art to use the dimension in order to view an image.

27.   As per claims 11 and 31, Iwase demonstrated all the elements as applied to the rejection of independent claim 1 and 27, supra, respectively.

As for the plural respective views are within only two angular dimensions, since Iwase discloses the plural respective view could be in one dimension, it would have been obvious to extend it to two dimension in order to have a wider perspective of the image.

28.   As per claim 12, Iwase demonstrated all the elements as applied to the rejection of dependent claim 11, supra.

As for the two angular dimensions are a horizontal angular dimension corresponding to angles within a horizontal imaging plane and a vertical angular dimension corresponding to angles within a vertical imaging plane, since the horizontal and vertical angular dimensions are notoriously well known angular dimensions, it would have been obvious to one of ordinary skill in the art to use these dimensions in order to view an image.

29.   As per claims 15, 26, 33 and 39, Iwase demonstrated all the elements as applied to the rejection of independent claims 1, 16, 27 and 34, supra, respectively.

As for the plural respective views of the image texture are based upon manually formed renderings of the image texture, since manually formed renderings of the image texture is notoriously known in the art, it would have been obvious to one of ordinary skill in the art to use it in order to generate a personalized image.

30.   As per claims 18 and 36, Iwase demonstrated all the elements as applied to the rejection of independent claims 16 and 34, supra, respectively.

As for the texture map tile corresponding to the viewing angle for each region is calculated based upon the determining of the viewing angle, it is obvious that the

texture map tile retrieved should correspond to the viewing angle to have a correct representation of the image.

31.   As per claim 20, Iwase demonstrated all the elements as applied to the rejection of dependent claim 19, supra.

As for the one viewing angle is a horizontal viewing angular corresponding to angles within a horizontal imaging plane, since the horizontal angular dimension is a notoriously well known angular dimension, it would have been obvious to one of ordinary skill in the art to use the dimension in order to view an image.

32.   As per claim 21, Iwase demonstrated all the elements as applied to the rejection of independent claim 16, supra.

As for determining a viewing angle for each region includes determining two viewing angles corresponding to angles within two transverse imaging planes, since Iwase discloses the plural respective view could be in one viewing angle, it would have been obvious to extend it to two viewing angle in order to have a wider perspective of the image.

33.   As per claim 22, Iwase demonstrated all the elements as applied to the rejection of dependent claim 21, supra.

As for the two viewing angles are a horizontal viewing angle and a vertical viewing angle corresponding to angle within horizontal and vertical imaging planes, respectively, since the horizontal and vertical angle are notoriously well known angular dimension, it would have been obvious to one of ordinary skill in the art to use these dimensions in order to view an image.

34.   As per claim 23, Iwase demonstrated all the elements as applied to the rejection

of independent claim 16, supra.

As for determining a viewing angle for each region includes determining only one

viewing angle for the region corresponding to angles within only one imaging plane, it is

obvious that the texture map tile retrieved should correspond to one viewing angle to

have a correct representation of the image.

35.   As per claim 24, Iwase demonstrated all the elements as applied to the rejection

of independent claim 16, supra.

As the texture map tile corresponding to the viewing angle is of a predetermined

tile structure and includes an oblique parallel projection of the predetermined tile

structure, the method is notoriously well known in the art and would have been obvious

to one of ordinary skill in the art to used the method in order to obtain an image in

perspective.

36.   Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwase et

al. as applied to claim 1 above and further in view of Standberg.

As per claim 13, Iwase demonstrated all the elements as applied to the rejection

of independent claim 1, supra.

Iwase discloses a medium representing an image texture for tiled texture

mapping. It is noted that Iwase does not explicitly disclose the image texture includes an

outer surface and the outer surface is of the same dimensions in each of the plural

respective views of the image texture, however, this is known in the art as taught by

Strandberg. Strandberg discloses "the segmented drawings are representative of

different positions within the sphere of a performance" (Figure 2 where the displayed

pictures are the outer face of an image and they ate all at the same dimension).

37.   Claims 14, 25, 32 and 38 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Iwase et al. as applied to claim 1 above and further in view of

Cosatto et al. (5,995,119).

As per claims 14, 25, 32 and 38, Iwase demonstrated all elements as applied in

the rejection of independent claims 1, 16, 27 and 34, respectively, supra.

Iwase discloses a medium representing an image texture for tiled texture

mapping. It is noted that Iwase does not explicitly disclose using morphing technique to

generate respective view, however, this is known in the art as taught by Cosatto et al.,

hereinafter Cosatto, Cosatto discloses an image generating method in which morphing

art used, column 2, line 50-65.

Thus, it would have been obvious to one of ordinary in the art at the time the

invention was made to incorporate the teaching of Cosatto into Iwase because Iwase

discloses a medium representing an image texture for tiled texture mapping and

Cosatto discloses morphing can be used in order to make generating in between image

possible.

Response to Amendment

38.   Applicant's arguments with respect to claims 1-39 have been considered but are

moot in view of the new ground(s) of rejection.

To overcome 35 U.S.C. 112, first paragraph rejection, applicant alleges "Figure 4

shows plural "view-dependent sprited tiles 404AA-404DF" that ate rendered together

(i.e., simultaneously) on display screen 402". In reply, examiner does not think this

argument is persuasive because there is no mentioning in the specification that the tiles

are rendered together. In addition, "rendered together" is not the same as "rendered

simultaneously", for "simultaneous" has more stringent time requirement than "together".

Examiner cannot conclude the image is simultaneously rendered by just looking at the

drawing.

Conclusion

39.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Inquiries

40.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Ryan Yang** whose telephone number is **(703) 308-**

6133.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Michael Razavi**, can be reached at **(703) 305-4713**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is (703) 305-47000377.

Ryan Yang
December 1, 2003
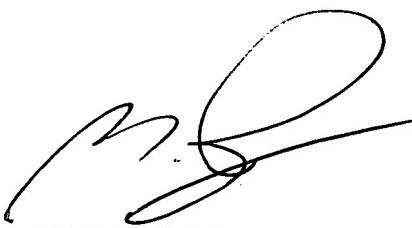
MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600